

Remarks

Applicants have carefully reviewed the Office Action of December 7, 2006, in which claims 1-23 are pending and were rejected. Favorable consideration is respectfully requested.

Claim Amendments

Independent claim 1 was amended to incorporate the elements of claim 2, which has been cancelled. Claim 3 has been amended to depend from claim 1. Independent claim 11 has been amended to incorporate the elements of claim 13, which has been cancelled. Independent claims 15, 19 and 22 have not been amended. No new art has been introduced.

Claim Rejections

Claims 1-23 were rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Hermann et al. (U.S. Patent No. 5,527,326) in view of Bates et al. (U.S. Patent No. 6,468,291). Applicants respectfully traverse the rejections.

As applicants understand the rejection, the Examiner alleges that Hermann et al. discloses the invention as claimed, or if Hermann et al. do not disclose the invention, that it would have been obvious to make the claimed invention by modifying Hermann et al. to make the distal end of the first strut slidably disposed on the shaft and to include a third strut mounted on the shaft as taught by Bates et al.

However, Hermann et al. do not disclose the claimed invention or any device which could be modified in view of Bates et al. to make the claimed invention, nor would anyone of skill in the art modify a device of Hermann et al. in view of Bates et al. and produce the claimed invention. The § 102 rejection thus fails because each and every element of the claimed invention is not disclosed and the § 103 rejection fails because each and every element is not taught or suggested.

Applicants start with claim 15, which applicants have not amended and whose language is simplest, for the purpose of this discussion. Claim 15 recites in part “wherein each of the struts include a proximal end attached to the shaft, a loop region, and a distal end slidably disposed along the shaft.” To clear up any potential ambiguity, it is worth discussing the term “attached.” This term, wherever it is used in the specification, is used in a manner that denotes *fixing*, which is to say that while many methods of attachment are possible, the end result of attachment is that the two elements attached are bound together such that there is no relative movement. For example, the specification teaches that “proximal ends 24a/b/c may be attached to a shaft 16 in a number of different manners. For example, proximal ends 24a/b/c may be wound about shaft 16, mechanically bonded (e.g. by crimping, attached by placing a sleeve over ends 24a/b/c, etc.), thermally bonding, welding, brazing, adhesively bonding, or in any other suitable manner.” Para. 15. Applicants have carefully reviewed the specification, and this use of “attach” is consistent throughout the specification. No one skilled in the art would read the specification and the claims and reasonably conclude that “attached” includes connections that do not limit relative movement.

Turning to the primary reference, Hermann et al., an apparatus is disclosed where a flexible coil 14 is concentrically disposed about a flexible wire 16, where the flexible coil has one or more radially expansible helically configured wire loops 28. The distal end of the coil 14 is fixed to the distal end of the wire 16. Stated another way, Hermann et al. disclose an apparatus with radially expandable loops, where the loops are proximally fixed to the distal end of a tubular coil and distally fixed to the distal end of a wire slidably disposed within the coil. Hermann et al. discuss this distal fixation explicitly only with reference to the embodiment of Figure 1: “The second region 18 of the flexible coil 14 is fixedly mounted to the distal end 20 of the flexible wire 16.” 2:57-58.

However, operation of the figure 5 apparatus, shown and described with respect to figures 12-14, can only be done if the distal end of the wire 16 is fixedly mounted to the distal region of the coil.¹ Hermann et al. teach that “gripping members 22 and 34 are radially expanded by applying a force to the wire 16 opposite to the distal end 20.” 5:38-40. The only way applying a force to the wire 16 opposite to the distal end 20 can radially expand the gripping members is if the wire is fixedly attached to distal region of the coil. Moving the wire 16 distally relative to the flexible coil expands the loops into a deposit in a blood vessel, allowing a shear force to be applied to the deposit to pull it and the apparatus out of the blood vessel. 5:6-11.

If one takes, as the Examiner has done, wire 16 of Hermann et al. as the element that anticipates the elongate shaft recited in claim 15, then one can see that the proximal end of each of the struts is not attached to the shaft (as required by the claim), but instead is slidably disposed on the shaft. Further, the distal end of each of the struts is fixed to

¹ The brief description of the drawings makes it clear that the apparatus of Figure 12 is the apparatus of Figure 5.

the shaft rather than “slidably disposed along the shaft” as claimed. If one takes, on the other hand, the flexible coil as the element that anticipates the elongate shaft of claim 15, one can say that the proximal end of each of the struts is attached to the shaft, but one cannot then say that the distal end of each of the struts is slidable along the shaft (because they extend distal of the “flexible coil” shaft). Thus, because each and every element of the claimed invention is not disclosed by Hermann et al., applicants respectfully submit that Hermann et al. does not anticipate original independent claim 15.

The Examiner argues in the alternative that one could modify the device of Hermann et al. in view of Bates et al. to make the distal end of the struts slidably disposed on the shaft. However, such a modification would still leave the proximal ends of the struts slidably disposed on the shaft and not “attached to the shaft” as required by the claim. One cannot attach the proximal ends of the struts of Hermann et al. to shaft 16 because that would make the apparatus inoperable; there would be no way to expand or contract the apparatus. Thus each and every element of the claimed invention has not been taught or suggested by Hermann et al. or Bates et al. and therefore a prima facie case of obviousness has not been established. Applicants thus respectfully submit that for at least this reason, claim 15 is in condition for allowance.

Amended independent claim 1 recites “a first strut having a first end attached to the shaft...and a second end coupled to the shaft” and “wherein the first end of the first strut is the proximal end of the first strut.” Amended independent claim 14 recites “wherein the proximal ends of the one or more strut members are fixedly attached to the shaft by winding the proximal ends about the shaft.” Each of original independent claims 19 and 22 recites “wherein each of the struts include a proximal end attached to the shaft,

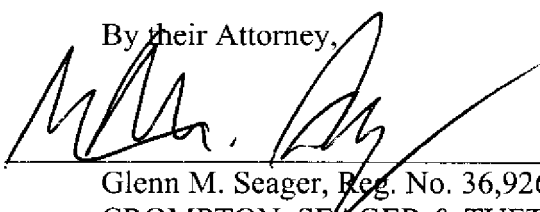
a loop region, and a distal end slidably disposed along the shaft.” Therefore, for at least the reasons discussed above with respect to claim 15, applicants respectfully submit that each of these independent claims are in condition for allowance. Dependent claims 3-10, 12, 14, 16-18, 20-21 and 23 depend from one of these independent claims, which applicants submit are allowable, and contain additional elements. For at least this reason, applicants submit that these dependent claims are allowable as well.

Reexamination and reconsideration are respectfully requested. It is respectfully submitted that the claims are now in condition for allowance, issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

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By their Attorney,

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